

U.S. Environmental Protection Agency



Watson Johnson Landfill Superfund Site

Priority Panel

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Remedial Project Manager – Region 3

Watson Johnson Landfill

- History
 - 20.4 inactive, unlined landfill
 - Waste from 1950-1970, MSW
- Remedial Investigation (RI)
 - Presumptive RI – Landfill Cap
 - RI – Groundwater and ecological investigation

Watson Johnson Landfill

- Removal Action
 - Provide Public Water to residents south of LF
 - Completed March 2006
- Issues
 - Richland Township Water Authority
 - Production well southwest of LF affecting groundwater plume
 - No VOC treatment on Production well (serves about 75 homes)

Watson Johnson Landfill

Remedial Investigation (RI)

•LF Area Investigation

- Presumptive RI
- Mostly MSW

GW and Ecological Investigation

- VOC plume
- Arsenic in GW is naturally occurring
- Hg in surface soil
- Metals in sediment

Watson Johnson Landfill Risk

- **Landfill**
 - Presumptive Remedy
 - Current/future risk for incidental ingestion of surface water, surface soil and sediment
- **Groundwater**
 - Plume moving towards unprotected production well
 - Future risk from ingestion and dermal route for noncancer hazards
 - Future risk from ingestion, dermal and inhalation routes for cancer hazards

Watson Johnson Landfill Risk (continued)

- **Ecological**

- Surface Soil

- Mercury exceeds screening benchmarks

- Sediments

- Cadmium, copper, lead, manganese, selenium and zinc slightly below or at probable effects levels

Landfill Area Remedy

- **Multi-layer Cap**
 - Multi-layer cap (soil and geosynthetic layers) cover system
 - Stormwater management controls
 - Revegetation – Native species
 - Ecological Area
 - Surface Soil – removal of 400 cubic yards
 - Sediment – removal of 250 cubic yards

Groundwater Remedy

- **In-situ Chemical Oxidation and Enhanced Bioremediation**
 - Installation of new wells for injection
 - Oxidant injection
 - GW Monitoring
 - Evaluation of microbial population